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10/582,792

06/14/2006

Nestor Rodriguez-Amaya

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EXAMINER

TIETJEN, MARINA ANNETTE

ART UNIT

PAPER NUMBER

4177

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/582,792 | Applicant(s) RODRIGUEZ-AMAYA ET AL. | |
| | Examiner MARINA TIETJEN | Art Unit 4177 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/14/2006 and 04/04/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

This office action is responsive to the preliminary amendment filed on June 14, 2006. As directed by the amendment: claims 1-10 have been cancelled, and new claims 11-20 have been added. Thus, claims 11-20 are presently pending in this application.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 5, 6, and 8 show reference number "16", but not described in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including

annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 13-15, 17, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 13, 14, and 15 recite the limitation "the valve needle". Claims 14, 17, 19, and 20 recite the limitation "the sealing edge". There is insufficient antecedent basis for these limitations in the claims.

6. In Claims 13 and 15, it is unclear what is intended by "the valve member of an inward-opening valve of an outward-opening valve". For the purpose of examination, it will be assumed the claims are meant to read "the valve member of an inward-opening valve or an outward-opening valve."

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 11-18 are rejected under 35 U.S.C. 102(a) and 102(e) as being anticipated by Boecking (US Publication 2003/0132413).

Regarding Claim 11, Boecking discloses a valve (Fig. 2) for controlling fluids that are at high pressure, having a valve seat region, at which a high-pressure region and a low-pressure region can be made to communicate with one another or can be disconnected from one another, and having a valve body 1 (Fig. 2), at which a seat face 9 (Fig. 2) is embodied for a conical valve member 5 (Fig. 2), the seat face 7 (Fig. 2) extending in inclined fashion in the valve body 1, the improvement wherein the conical valve member 5 comprises a multi-conical geometry in the valve seat region, including at least one first conical face 30 (Fig. 2) and one second conical face 32 (Fig. 2), and wherein the first conical face 30 has a seat angle difference d1 (Fig. 2) from the seat face 7 of the valve body 1.

Regarding Claim 12, Boecking discloses the second conical face 32 (Fig. 2) of the multi-conical geometry has a further seat angle difference d2 (Fig. 2) that exceeds

the seat angle difference d1 (Fig. 2) of the first conical face 30 (Fig. 2) (paragraph 0017).

Regarding Claim 13 and 15 as best understood, Boecking discloses the valve needle 5 (Fig. 2) is the valve member of an inward-opening valve (Fig. 2), and wherein the seat angle difference d1 between the first conical face 30 (Fig. 2) and the seat face 9 (Fig. 2) of the valve body is less than 5° (paragraph 0019).

Regarding Claim 14 and 17, Boecking discloses the sealing edge 34 (Fig. 2) is located between the first conical face 30 and the second conical face 32 and coincides with an encompassing edge of the multi-conical geometry or valve needle 5 (Fig. 2), and wherein conical face portions 30 and 32 extend radially inward and radially outward from the sealing edge 34 (Fig. 2) and have different seat angle differences (d1, d2) from the seat face 9 (Fig. 2) in the valve body 1 (Fig. 2)(paragraph 0015).

Regarding Claim 16, Boecking discloses a pocket-like recess 38 (Fig. 2) is in the seat face 9 (Fig. 2) of the valve body 1 (Fig. 2) of the inward-opening valve.

Regarding Claim 18 Boecking discloses the seat angle difference d1 (Fig. 2) at the first conical face 30 (Fig. 2) is embodied as extending radially outward (Fig. 2).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boecking (US Pub2003/0132413).

Boecking discloses the invention as essentially claimed except for the sealing edge is an edge of a seat face of the valve body, and wherein the sealing edge is located between the seat face and a chamfer on the valve body, wherein the chamfer has the seat angle difference from the seat face.

However, Boecking already teaches the sealing edge is on the needle face located between two conical surfaces, wherein the second surface has a differential angle relative to the first surface.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Boecking's invention to have the sealing edge on the valve body instead of the needle's seat face by having a conical surface (such as with a chamfer) with a differential angle from the seat face of the valve body, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. In re Einstein, 8 USPQ 167.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zeuch et al. (2,927,737) is an example of the sealing edge on the valve body seat face versus the needle seat face.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARINA TIETJEN whose telephone number is (571)

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270-5422. The examiner can normally be reached on Mon-Thurs, 8:00AM-4:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quang D. Thanh can be reached on (571) 272-4982. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang D. Thanh/
Supervisory Patent Examiner,
Art Unit 4177

/M. T./
Examiner, Art Unit 4177